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Applicants: Craig A. Branch and Joseph A. Helpern

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We claim:

1. An apparatus for use in RF shielding, comprising:

a holder comprising RF shielding and configured for forming a substantially complete RF shield when the holder is adjoined to the cavity of a magnet associated with magnet-RF-shielding.

- 2. The apparatus of claim 1, wherein the holder comprises a bottom portion comprising RF shielding.
- 3. The apparatus of claim 2, wherein the holder further comprises a canopy comprising RF shielding.
- 4. The apparatus of claim 2, wherein the holder further comprises a patient end cap comprising RF shielding.
- 5. The apparatus of claim 3, wherein the canopy removably attaches to the bottom portion.
- 6. The apparatus of claim 2, wherein the bottom portion comprises apertures.
- 7. The apparatus of claim 4, wherein the patient end cap comprises apertures.
- 8. The apparatus of claim 1, further comprising a positioning means attached to the holder.
- 9. The apparatus of claim 8, wherein the positioning means comprises a support configured to support the holder and means for locomotion.
- 10. The apparatus of claim 9, wherein the means for locomotion comprises wheels.
- 11. The apparatus of claim 9, wherein the means for locomotion comprises rollers.

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- 12. The apparatus of claim 1, further comprising a patient support unit.
- 13. The apparatus of claim 12, wherein the patient support unit comprises an RF transmitter antenna and an RF receiver antenna.
- 14. The apparatus of claim 12, wherein the patient support unit comprises an RF coil.
- 15. The apparatus of claim 12, wherein the patient support unit comprises a support configured to hold an animal.
- 16. The apparatus of claim 12, wherein the patient support unit comprises a support configured to hold a human.
- 17. The apparatus of claim 15, wherein the support is configured to hold an animal in an inverted position.
- 18. The apparatus of claim 17, wherein a cross section of the support is configured to substantially match the curvature of an animal's spine.
- 19. The apparatus of claim 18, wherein a cross section of the support is substantially Ushaped.
- 20. The apparatus of claim 18, wherein a cross section of the support is substantially V-shaped.
- 21. The apparatus of claim 18, wherein the patient support unit comprises an RF transmitter antenna and an RF receiver antenna.
- 22. The apparatus of claim 18, wherein the patient support unit comprises an RF coil.
- 23. The apparatus of claim 22, wherein the RF coil comprises a non-planar coil.
- 24. The apparatus of claim 23, wherein a cross section of the RF coil substantially matches a cross section of the support.

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- 25. The apparatus of claim 23, wherein the RF coil comprises a plurality of loops.
- 26. The apparatus of claim 22, wherein the RF coil comprises an upper RF coil connected to a lower RF coil.
- 27. The apparatus of claim 22, wherein the RF coil is movable.
- 28. The apparatus of claim 15, wherein the patient support unit comprises straps for holding an animal.